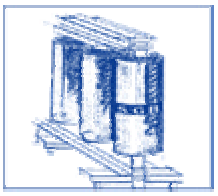


SGB STARKSTROM

Partners in Power

SMIT TRANSFORMERS

Cast Resin Transformers

Thanks to the design

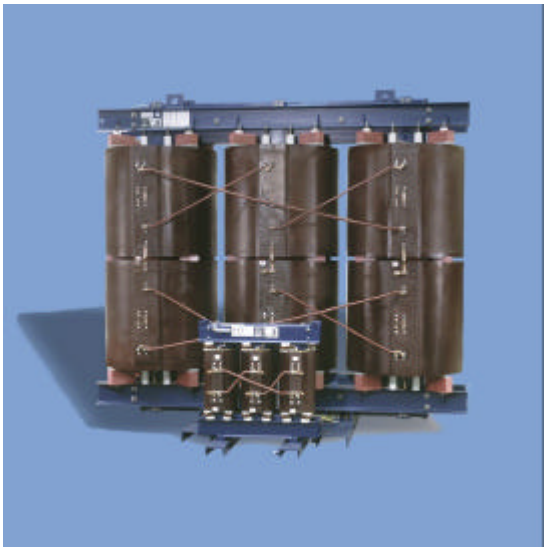
SGB Cast Resin Transformers

offer a number of outstanding properties which make them extremely cost-effective, reliable and safe solutions.

SGB Cast Resin Transformers are available up to 24 MVA and 36 kV voltages and are produced for all kinds of use as for example as rectifier transformers.

Why Cast Resin Transformers?

- **Reduced Costs,**
  due to the fact that low fire risk permits location near the load – shortens expensive LV feeders – reduces volt-drop.
- **Planning Flexibility and Safety**
  No oil sump – no fire bvarriers – no siting restrictions. Thermal mass less than 15 % of equivalent oil transformer.
  No special building work.
- **Maintenance Free**
  No oil, radiator, or tank problems – only needs air for cooling.
  Completely sealed windings – impervious to damp and dust.
- **Power Reserves**
  Short-time overload capacity much greater than liquid-filled transformers.
  For longer overloads, forced cooling is a standard option.



The Core

- **High quality, grain oriented steel, and „Step-lap“ laminated mitred joints reduce no-load losses and noise.**
- **Binding and two part coating ensure cohesion of the core laminations – protect against corrosion – further reduce noise.**

The Low-Voltage Winding

- **Full-height sheet is wound in prepreg insulation and bonded by a heating process into a strong cylinder.**
- **Short-circuit stresses are minimized because the current distributes freely across the full-height conductor.**

The High-Voltage Winding

- **Spiral layer wire winding in epoxy/glass fiber insulation, void-free cast in steel mould**
- **Very thin epoxy resin with no filler ensures complete impregnation of glass fiber by capillary action and vacuum.**
- **Cooling ducts not only further improve cooling.**
- **Small dimensions, especially low height**
- **Even the most extreme and rapid temperature fluctuations will not induce cracking of insulation or deformation of the winding, due to the strength balance and elasticity of the epoxy/glass fiber combination.**
- **Partial discharge below 10 pc – every coil and complete transformer routine tested.**
- **Ageing tests at high temperatures and in extreme ambient conditions prove long-term performance and freedom from partial discharge.**

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